

REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-5, 7-16 and 18-28 are presently active in this case. The present Amendment amends Claims 1-5, 7-9, 11-16, 18-20 and 22; cancels Claims 6 and 17 and adds Claims 23-28.

The outstanding Office Action objected to the title and Claims 2, 4, 6, 7, 12, 15, 17 and 18 because of informalities. Claims 1-22 were rejected under 35 U.S.C. § 102(b) as being anticipated by Iida et al. (U.S. Patent No. 5,356,220). Claims 1-10 and 12-21 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/706,937. Claims 11 and 22 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/706,937 in view of Iida et al.

In response to the rejection under the judicially created doctrine of double patenting, Applicants herewith file a terminal disclaimer in compliance with 37 C.F.R. §1.321 thereby overcoming the double patenting rejection of Claims 1-22. For the record, Applicants note that the “filing of a terminal disclaimer simply serves the statutory function of removing the rejection of double patenting, and raises neither presumption nor estoppel on the merits of the rejection.”<sup>1</sup>

In response to the objections, the title and Claims 2, 7 and 18 are amended to correct the noted informalities. In light of their formal nature, the changes to the claims do not raise a question of new matter.

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<sup>1</sup> Quad Environmental Technologies Corp. v. Union Sanitary District, 946 F.2d 870, 874, 20 USPQ2d 1392, 1394-5 (Fed. Cir. 1991).

In order to clarify Applicants' invention, Claims 1, 3-5, 8-9, 11-16, 19-20 and 22 are amended. Independent Claims 1 and 12 are amended to recite features from Claims 6 and 17, respectively.

In order to vary the scope of the protection recited in the claims, new dependent Claims 23-28 are added. Claims 23-28 find support in the disclosure as originally filed, for example, at page 1, paragraph [0003], at page 2, paragraph [0004], at page 4, paragraph [0010], at page 6, paragraph [0015] and at page 7, paragraph [0017]. Therefore, the changes to the claims and new Claims 23-28 are not believed to raise a question of new matter.<sup>2</sup>

In response to the rejections of independent Claims 1, 12 and dependent Claims 2-11 and 13-22 under 35 U.S.C. § 102(b) as being anticipated by Iida et al., Applicants respectfully request reconsideration of this rejection and traverse the rejection as discussed next.

Briefly recapitulating, Applicants' invention, as recited in Claim 1, relates to a method of monitoring temperature conditions. The method includes the step of inputting a light pulse into a fiber optic cable. The method further includes the step of receiving a reflection signal that arises from the input light pulse in the fiber optic cable and the step of determining temperature conditions on different portions of the fiber optic cable based on the reflection signal. In addition, the step of determining temperature conditions includes the step of performing a comparison for each of the different portions of the fiber optic cable. As explained in Applicants' specification, Applicants' invention improves upon conventional methods because different temperature thresholds or limits values can be allocated to different ranges of the reflection signal transit time, which in turn are respectively allocated

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<sup>2</sup> See MPEP 2163.06 stating that "information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter."

to respective zones of the sensor.<sup>3</sup> The claimed invention thus leads to an improved method of monitoring temperature conditions.

Turning now to the applied prior art, the Iida et al. patent discloses a method and apparatus for monitoring temperature of a blast furnace. More specifically, the method uses a fiber optic which is laid in a spiral shape on a surface to be monitored, one end of the optical fiber being connected to a temperature measuring apparatus.<sup>4</sup> However, the Iida et al. patent fails to teach the step of determining temperature conditions on different portions of the fiber optic cable based on the reflection signal, the step of determining temperature conditions including the step of *performing a comparison for each of the different portions* of the fiber optic cable. The outstanding Office Action relied on the Iida et al. patent at Col. 3, lines 44-51. The Applicants respectfully traverse the position that the Iida et al. patent discloses the above step. Indeed, the above mentioned passage of Iida et al. merely states: "a measured position (or a segment) is detected from a time interval from the transmission of the light pulse until the Raman scattering light returns thereby to measure a temperature distribution on the surface of the iron skin based on the intensity on the measured position." The Iida et al. method, therefore, measures a temperature distribution but does not teach or suggest the claimed step of performing *a comparison for each of the different portions* of the fiber optic cable.

Consequently, the prior art fails to teach or suggest every feature recited in Applicants' claims, so that Claims 1-5, 7-16 and 18-22 are patentably distinct over the prior art. Accordingly, Applicants respectfully traverse, and request reconsideration of the rejections based on the Iida et al. patent.

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<sup>3</sup> See Applicants' specification at page 6, paragraph [0015].

<sup>4</sup> See the Iida patent, for example the Abstract.

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Furthermore, the prior art fails to disclose the features of new Claims 23-28 in combination with the features of Claim 1. Therefore, new Claims 23-28 are further believed to be allowable.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-5, 7-16 and 18-28 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicant's undersigned representative at the below listed telephone number.

Respectfully submitted,

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